



Business Plan for Atlas

**Guiding every step with precision through the intricate
dance of the molecular world.**

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Guiding every step with precision through the intricate dance of the molecular world.

Atlas.Y is a bioinformatics tool focused on optimizing enzyme subcellular localization in yeast through molecular tag design software. By leveraging advanced algorithms and integrating data analysis, it caters to academic, research, and corporate users in biotechnology and synthetic biology sectors. This plan outlines our strategy for market entry, business development, and sustained growth, using the EPIC (Elicit, Prototype, Iterate, Consolidate) framework to guide each phase.

1. Business Model Overview

Elicit: We identified core market needs through surveys and interviews with experts. Market research revealed a demand for bioinformatics tools tailored to yeast metabolic optimization. Key findings from discussions with users and professionals at various biotechnology companies helped in shaping our initial prototype.

Prototype: We designed a membership-based business model with a combination of pay-per-use algorithms, subscription services, and potential for advertising revenue. Initial pricing strategies were developed based on market positioning, with academic discounts included to expand outreach.

Iterate: We continuously refined the business model by integrating market analysis, cost predictions, and customer lifetime value (LTV) to customer acquisition cost (CAC) metrics. Our financial model predicted annual revenue growth with projections based on user conversion rates and expansion strategies.

Consolidate: The plan now incorporates future growth strategies, such as expanding into enterprise solutions, collaborating with research institutions, and exploring new geographical markets. We also refined our marketing approach to target both academic and enterprise users through a combination of digital marketing and industry events.

2. Market Demand

2.1 Target User Profile

User Persona: Business Individuals



YAO

Individual Biotechnology
Entrepreneurs
Professionals in the field of
biomanufacturing
Leaders of small biotech startups

Interests: Emerging technologies such as synthetic biology, enzyme optimization, and protein localization. They are highly interested in cost control and improving production efficiency.

Typical Scenarios: They are currently developing or optimizing biotechnology products, utilizing enzyme localization technologies to enhance product output and quality. They need to solve real-world issues related to production efficiency, cost management, and resource management.

Behavior: They frequently seek innovative solutions that can improve production efficiency and reduce costs. They stay actively informed about cutting-edge technologies and use software tools to design and optimize molecular tags to enhance production precision.

User Insights: Business Individuals



YAO

Individual Biotechnology
Entrepreneurs
Professionals in the field of
biomanufacturing
Leaders of small biotech startups

Pain Points: The difficulty in selecting molecular tags (70.5%) complicates the production process. Stability issues during production impact product quality and yield (66.91%).

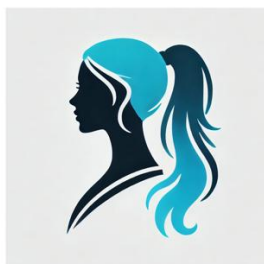
Existing Solutions: They currently use basic molecular tags and localization tools but are often dissatisfied due to the complexity of the operation or inconsistent results.

Emotional Expectations: They desire tools that are simple and intuitive yet highly flexible, significantly reducing complexity and uncertainty in the production process.

Functional Expectations: They expect tools to provide more efficient molecular tag selection solutions while reducing the chances of human error. They also need tools that automate more processes to optimize production, enhance efficiency, and reduce costs.

- **User Characteristics:** Includes individual researchers, freelancers, small startups, and consulting companies. These users typically look for cost-effective tools and services to support specific projects or small-scale business operations.
- **Demand:** High demand for one-time algorithm purchases, usually opting for the basic or professional membership.
- **User Scale:** Since the number of individual users is large and widely distributed, this user group is expected to account for a significant portion of the total user base. Market research shows that the number of freelancers and small businesses is steadily increasing, especially with the growing adoption of digital tools.
- **Estimated Scale:** Likely to account for 40-50% of the total user base.

User Persona: Enterprise Production



YUAN

A member of academic institutions
focusing on synthetic biology, molecular
biology, and protein research.

Research Focus: Subcellular resolution studies, enzyme localization mechanisms, and the interactions between proteins and organelles.

Typical Scenario: Conducting yeast subcellular localization experiments in the lab, aiming to observe protein localization patterns using molecular tag technology (84.17%).

Research Needs: Requires precise control of yeast protein subcellular localization for in-depth studies and to obtain higher resolution data.

Seeks computer-aided tools to simplify the molecular tag design process and improve research accuracy (95.68%).

User Insights:Enterprise Production



YUAN

A member of academic institutions
focusing on synthetic biology, molecular
biology, and protein research.

Pain Points:Difficulty in selecting molecular tags, which affects the efficiency of experiments and the precision of research (70.5%). Yeast stability issues introduce uncertainty into the experimental process, impacting repeatability and data reliability (66.91%).

Existing Solutions:Basic molecular tag selection and localization tools are being used, but they lack flexibility and struggle to meet the demands of complex research.

Emotional Expectations:Hopes that software tools will be intuitive and easy to use, reducing stress and allowing them to focus more on the research itself.

Aims to advance biomedical and synthetic biology research by improving subcellular localization techniques, contributing to societal health and technological progress.

Functional Expectations:Seeks high-precision tools to assist in molecular tag design and optimization, enhancing the accuracy and repeatability of research.

Desires flexible simulation and experiment design support from the tools, enabling further exploration of possibilities in academic research.

- **User Characteristics:** Universities, research institutions, researchers, and laboratories. Academic users prioritize highquality research tools and often require longterm data processing and algorithm optimization features.
- **Demand:** They are more likely to choose professional or enterprise memberships, especially when handling largescale data analysis or collaboration. They may also require flexible academic pricing.
- **User Scale:** The number of academic institutions and researchers is substantial, and fields like synthetic biology, data analysis, and algorithm optimization have increasing demands for such tools.
- **Estimated Scale:** Likely to account for **2030%** of the total user base.

3. Corporate/Enterprise Users

User Persona:Enterprise Production



Juzhen Co.

Small and medium-sized
biomanufacturing companies
Engaged in biopharmaceutical
production activities

Enterprise Field and Scale:Fields include industrial production and biomedicine (87.05%). A typical enterprise may have dozens to hundreds of employees, focusing on increasing yield and production efficiency through enzyme optimization technologies.

Typical Scenario:In large-scale biomanufacturing, enterprises need to optimize the subcellular localization of enzymes through molecular tag technology to ensure efficient production.

Production Actions:They rely on yeast and molecular tagging systems for enzyme production, optimizing localization to improve enzyme efficiency and increase the yield of target products (64.75%).

User Insights:Enterprise Production



Juzhen Co.

Small and medium-sized
biomanufacturing companies
Engaged in biopharmaceutical
production activities

Pain Points:High technical difficulty in large-scale applications (56.83%), particularly with challenges in precise localization and stability.

High production costs, primarily due to inaccurate localization and mispositioned enzymes causing resource waste (54.68%).

Existing Solutions:The currently used technologies are insufficient to meet the demands of large-scale industrial production, still requiring manual regulation and constant adjustments to ensure stability.

Social Expectations:They hope to drive the green transformation of industrial production through technological innovation, reducing environmental pollution and enhancing the company's sense of social responsibility.

Economic Expectations:They expect to further improve production efficiency and reduce costs through precise enzyme localization technologies, maximizing economic benefits.

- **User Characteristics:** Midsized and large companies, multinational corporations with more complex needs and larger budgets, requiring customized solutions and advanced features.
- **Demand:** Enterprise membership, which includes advanced algorithms, batch processing, big data analytics, and team collaboration tools. Corporate clients place high importance on data privacy, compliance, and security.
- **User Scale:** While the number of enterprise users is smaller, each client tends to contribute significantly more revenue. Enterprise users often depend on highend subscription services.
- **Estimated Scale:** Likely to account for **2030%** of the total user base, but contribute a large proportion of revenue.

2.2 Timing of Demand

a. Project Planning and Experimental Design Stage

During the planning and experimental design stage of research projects, researchers need to determine the subcellular localization of enzymes to optimize yeast metabolic pathways. Therefore, they will need molecular tag design tools in the early stages.

b. Experiment Optimization and Results Analysis Stage

When analyzing experimental results, if the metabolic pathways or protein localization do not meet expectations, researchers will use the tool to redesign the subcellular localization in yeast for optimization.

c. Commercial Production Stage

In biopharmaceutical or industrial fermentation processes, companies will perform process optimization before scaling up production, at which point they need to ensure optimal subcellular localization of key enzymes.

2.3 Business Model Insights

YanYin Technology is a hightech company focused on providing digital solutions in the biopharmaceutical field, offering comprehensive genomics, proteomics, and synthetic biologyrelated platforms. The company aims to enhance research efficiency and accuracy through advanced algorithms, AI technology, and big data processing, helping research institutions and companies achieve breakthroughs in digital transformation. In this interview on business models, we conducted an indepth discussion on the technical feasibility, market demand, application prospects, revenue model, and promotion strategy of the Atlas.Y software and developed a corresponding commercialization plan based on our project.

2.3.1. Technical Feasibility and Innovation

Key interview points:

The interviewee pointed out that the innovation of Atlas.Y lies in building a proprietary database focused on optimizing subcellular localization of synthetic enzymes in yeast, which is the core of its technical competitiveness. The bioinformatics tools on the market have matured, but the complexity of signal peptide design and customization needs provide room for innovation.

The interviewee emphasized that the technical challenges mainly lie in data processing and the application of optimization algorithms, which are crucial for improving the accuracy of signal peptide localization.

Design Measures:

We focus on optimizing the database and algorithm models. We introduced machine learning techniques for intelligent optimization of signal peptide sequences and applied directed evolution algorithms to enhance the functional stability of signal peptides.

2.3.2. Market Demand and User Segmentation

Key interview points:

The interviewee noted that the market for bioinformatics tools in the biotech field is relatively small and highly competitive, with wellestablished tools already dominating. Therefore, finding a unique product positioning is critical.

Among user groups, Bend (enterprise users) play an important role. While academic institutions represent a larger user base, enterprise users provide greater added value and are more willing to pay for customized services.

Design Measures:

Based on the interview's suggestions, we developed specialized modules targeting enterprise users, especially with features like data security and integrated experimental process management. Additionally, we added a customization module for enterprise versions to provide comprehensive experimental support based on their needs.

2.3.3. Application and Market Prospects

Key interview points:

The interviewee believes that the Atlas.Y software has broad application potential in the fields of biology and medicine, particularly in optimizing enzyme localization. The platform could act as a plugin for other companies' digital tools, with collaboration rather than acquisition being the future trend.

Design Measures:

We plan to develop a modular design based on this suggestion to facilitate integration with existing biopharmaceutical and synthetic biology platforms. To expand the software's application scenarios, we also plan to develop more plugin functions, enabling it to flexibly integrate with different digital biology platforms.

2.3.4. Revenue Model

Key interview points:

The interviewee suggested that academic users could use the software for free to expand social impact, while enterprise users would unlock features through a paid model. Collaboration-based revenue models with research labs may be difficult, with greater benefits from enterprise partnerships.

Charging for unlocked features might hinder market expansion, but once the user base grows sufficiently, other revenue models could be explored.

Design Measures:

We have adopted this advice in our business model, implementing a dual-track revenue model: providing free or discounted trial access to academic users to increase market penetration, while offering a pay-per-use and subscription model for enterprise users, with customized services for high-end corporate clients. Additionally, we are exploring future revenue streams through advertising and collaborative projects.

2.3.5. Market Promotion Strategy

Key interview points:

The interviewee suggested that Bend user promotion should focus on increasing exposure through industry forums and conferences, while Cend users can be promoted effectively through WeChat articles and other social media channels.

Design Measures:

We optimized our promotional strategy by focusing on the Bend market, particularly by participating in major global bioinformatics and biopharmaceutical conferences to enhance brand visibility. At the same time, we are continuously promoting to Cend users through WeChat and social media to expand our influence within the research community.

2.3.6. Recommendations and Risk Mitigation

Key interview points:

The interviewee recommended paying attention to the target audience's actual payment capabilities in terms of pricing and technical risk management, especially given the complex approval processes in laboratories. The enterprise version should be more comprehensive, and adbased revenue should be introduced once the user base is established.

Design Measures:

We have adopted a flexible pricing strategy, simplifying the approval process for lab users. The development of the enterprise version has been prioritized, and we will continue to improve its features. Regarding adbased revenue, we plan to gradually introduce advertisements and valueadded services as the platform's user base grows.

This interview further validated the market demand and technical feasibility of the Atlas.Y software, and we adjusted our design measures according to the business insights gained. Moving forward, we will continue to deepen the enterprise user market, improve product functionality, and ensure the sustainable development of the project through flexible revenue models and promotional strategies.

3. Revenue Model Design

3.1 Membershipbased Revenue

3.1.1 Free Version

Core Features:

- Basic protein localization design
- Overall functionality scoring
- Overall stability scoring

SHEEL Integration:

▪ Free users can access basic SHEEL evaluation prompts to help them understand the ethical and social impact of their designs.

Target Users:

- Students, beginners, and researchers who use the tool occasionally.

Revenue Model:

- Attract a large number of users through the free version and encourage them to upgrade to paid versions.
- Optionally embed a small amount of biotechnologyrelated advertisements in

the free version (optional, ensuring that it does not affect user experience).

3.1.2 Professional Version

Core Features:

- Includes all features of the free version
- Full access to the algorithm store, offering the following algorithms:
 - i. SiteSpecific CAD Scoring System
 - ii. Protein Localization Prediction System
 - iii. Protein Evolution Optimization System
 - iv. Temporal Dynamic Localization Design System

SHEEL Compliance:

- Professional users can access more detailed SHEEL integration options, providing deeper ethical and social impact analysis during the design process.

Pricing:

- Monthly subscription: Suitable for frequent users and small to medium sized labs, midrange pricing.
- Annual subscription: Discounts are offered to attract longterm users.

Target Users:

- Active researchers, small and medium sized labs, and users who need more advanced tools.

Revenue Model:

- Generate stable income through the subscription model.
- Earn additional revenue through inapp purchases in the algorithm store, where users can buy more features as needed.

3.1.3 Enterprise Version

Core Features:

- Includes all the features of the professional version, plus exclusive services and features for enterprises:
 - Custom Development: Provide customized software development and advanced algorithm support based on enterprise needs.
 - Team Management: Support internal team collaboration, providing features such as data sharing and permission allocation.
 - Enterprisegrade Data Security: Offer advanced data privacy protection and compliance features to meet enterprise data management needs.
 - Sustainability Reports: Generate reports on corporate social responsibility and environmental impact, showcasing the company's ethical commitments.

SHEEL Integration:

- SHEEL refers to four core dimensions in technical projects: Social (Social), Health (Health), Environmental (Environmental), Ethical (Ethical), and Legal (Legal) considerations. Each dimension is closely related to the project's social responsibility, health impact, environmental sustainability, ethical compliance, and legal risks in technology development and application.
- Generate reports that include SHEEL considerations, helping companies demonstrate their social responsibility and environmental commitments.

Pricing:

- Annual subscription: Highpriced, customized based on the size and needs of the enterprise.

Target Users:

- Biomanufacturing companies, large research institutions, and enterprises with strict data privacy and regulatory requirements.

Revenue Model:

- Profit from highpriced subscription fees and custom development fees.
- Provide advanced consulting and technical support services for additional fees.

3.2 Algorithm Store

The Algorithm Store offers algorithm tools for users to purchase as needed, catering to specific research directions or less frequent research needs. These inapp purchases provide users with flexibility while generating additional revenue for the software.

Product List

1. SiteSpecific CAD Scoring System

The CAD scoring algorithm provides a quantitative evaluation of the structural similarity between a protein's active site and a reference model. This algorithm assesses the accuracy and physical realism of a protein model by calculating the differences in residue-residue contact areas. By selecting specific sites in the protein, users can obtain CAD scores for these locations, enabling precise evaluation of the structural fidelity and potential functionality of the site.

2. Temporal Dynamic Localization Design System

The Temporal Dynamic Localization Design System utilizes lightsensitive components and localization tags to achieve timecontrolled regulation of protein localization. This system can precisely manipulate the positioning of proteins within cells or other environments, aiding in the study of protein behavior, interactions, and functions over time.

3. Optimized Protein Evolution Localization System

The Optimized Protein Evolution Localization System uses computational algorithms

to assist in protein evolution. Based on the user's selection of a specific organelle, the system evolves the user's fusion protein to be suitable for localization within that organelle. This system is a powerful tool in the field of protein engineering, aiding in the design of proteins with enhanced localization capabilities and functionality tailored to specific cellular environments.

4. Protein Localization Prediction System

The Protein Localization Prediction System analyzes protein sequences and structural features using advanced algorithms to predict protein localization within cells. This system helps optimize research workflows, supports the design of novel proteins, enhances experimental efficiency, and improves protein design for specific cellular applications.

Package System

To cater to different user needs and encourage frequent use, we have designed algorithm packages that provide both cost savings and flexibility in usage. By offering bundled packages, users who need regular access to multiple algorithms can benefit from reduced costs, compared to purchasing each algorithm separately. This strategy targets researchers who require high-frequency use of specific tools, allowing them to save while maintaining access to essential functionalities. Furthermore, the packages are structured to offer a variety of options—ranging from basic tools to advanced combinations—thereby appealing to both individual users and research teams with varying usage levels. For instance, frequent users of tools like the Site-Specific CAD Scoring System can purchase a multi-use package to reduce costs over time. Additionally, users who need access to all available algorithms can benefit from the "all-in-one" package, further enhancing flexibility and encouraging long-term commitment through longer validity periods.

3.3 Advertising Revenue

In our free version of the software, we will embed ads related to the biotechnology field. Users can choose to click on the ads based on their interests to learn more relevant information. This approach not only provides users with valuable content related to their research field but also brings us additional revenue. We will adopt the following monetization models:

Ad Display Revenue: We will earn revenue based on the number of ad impressions (i.e., Cost Per Thousand Impressions, CPM). The ads will appear in nonintrusive areas of the software to ensure that they do not disrupt the user experience while increasing ad visibility.

Clickthrough Rate Revenue Sharing: When users click on ads and further visit the advertiser's content, we will share revenue with the advertiser based on the number of clicks (Cost Per Click, CPC). This model can enhance ad interaction and bring continuous revenue growth to the platform.

This advertising revenue strategy not only allows us to generate income from free users but also provides advertisers with an efficient channel to directly reach

relevant researchers, scientific teams, and other target user groups.

3.4 Academic Discounts

3.4.1 Purpose and Alignment with Human Practices

The **academic discount** initiative aims to make advanced bioinformatics tools accessible to researchers and educational institutions that may face budget constraints. By offering significant discounts, the Atlas.Y platform not only promotes research but also aligns with core values of **social equity** and **inclusivity**. Providing affordable access to cutting-edge technologies helps academic users advance their work in life sciences, public health, and environmental studies, thereby contributing to the common good.

This initiative supports the **Integrated Human Practices** philosophy by ensuring that knowledge and technology are not limited to commercial entities but are accessible to educational and research institutions that work for the betterment of society. By enabling more research on issues such as sustainability, global health, and environmental protection, the Atlas.Y platform contributes to long-term societal benefits.

3.4.2 Academic Discount and Technology Transfer

The **academic discount** is structured to provide up to **50% off** for educational institutions, ensuring that financial limitations do not impede scientific progress. By offering different pricing tiers (Basic, Professional, and Enterprise), the platform caters to both small and large research groups, allowing them to access essential tools at discounted rates.

- **Human Practices Impact:** By lowering the cost barrier, academic users are empowered to conduct more research on **socially relevant issues** like climate change, public health, and biotechnological advancements, which have far-reaching benefits for society.
- **Technology Transfer:** In addition to discounts, Atlas.Y promotes the **transfer of technology** from research institutions to industry. By facilitating partnerships between academic researchers and commercial entities, Atlas.Y enables the commercialization of breakthrough innovations that emerge from academic research. This model fosters collaboration, ensuring that socially beneficial technologies, such as sustainable agricultural methods or medical innovations, reach broader markets.
- **Ethical Considerations:** Technology transfer agreements emphasize **fair licensing practices**, ensuring that original researchers are credited and compensated for their work. Additionally, nonexclusive licensing for educational purposes ensures that these innovations remain accessible for public benefit, while exclusive licenses allow for targeted commercial applications.

3.4.3 Social Care and Sustainability

By offering academic discounts and focusing on technology transfer, the Atlas.Y platform embodies a commitment to **social responsibility**. This approach ensures

that advancements in technology are not just commercialized but are also shared with the broader academic community, which often drives research for societal improvement.

- **Sustainability and Social Impact:** Discounts enable researchers to contribute to sustainability initiatives, fostering projects that aim to reduce environmental impact. Atlas.Y helps bridge the gap between **academic research** and **realworld applications**, empowering researchers to bring innovative, sustainable solutions to life.

3.4.4 Measurable Impact

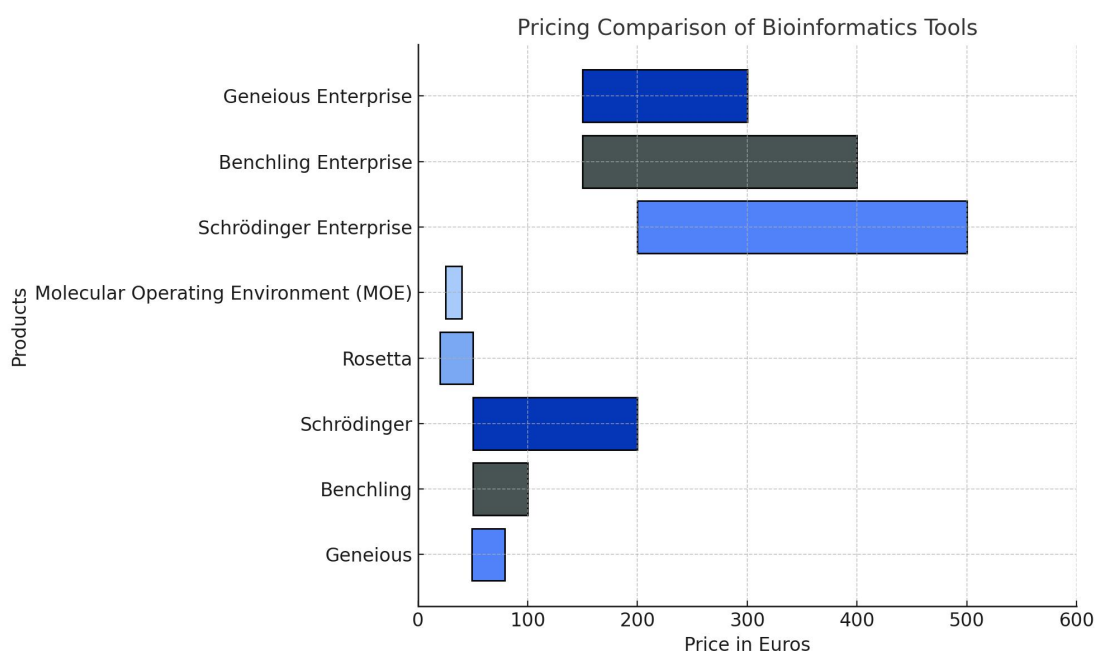
- **Longterm Societal Benefits:** Supporting research through affordable tools accelerates **scientific discoveries** that can address societal challenges such as disease prevention, environmental protection, and resource management.
- **Broad Access:** More institutions, especially those in **developing regions**, will have the opportunity to participate in global scientific advancements, ensuring more inclusive progress.

4. Competitive Analysis and Product Pricing

4.1 Market Bioinformatics Tools Price Information

Platform		Price Range	Type	Features	Pricing Basis
Geneious	Geneious	49-79 EUR/month	Subscription	Complete bioinformatics tool from sequence analysis to genome assembly	Professional bioinformatics solution, suitable for small labs and individual users
	Geneious Enterprise	150-300 EUR/month	Enterprise Subscription	Customizable tools and data security for pharmaceutical companies and research institutes	Flexible for different team sizes, provides more customization options
Benchling	Benchling	50-100 EUR/month	Subscription	Experimental data management and biological design tools, highly integrated	Prices fluctuate based on function depth and team size
	Benchling Enterprise	150-400 EUR/month	Enterprise Subscription	Advanced data management, team collaboration, and compliance management	Pricing varies with company size and collaboration requirements
Schrödinger	Schrödinger	50-200 EUR/month	Subscription	Molecular simulation, drug design, and protein structure analysis	Flexible, based on the required modules and tools, higher-end for advanced features
	Schrödinger	30-50 EUR/use	Pay-per-use	High-end modules for protein design or drug molecular docking	Highly specialized, priced based on complexity and precision required
	Schrödinger Enterprise	200-500 EUR/month	Enterprise Subscription	Advanced molecular modeling, drug screening, team collaboration, and data privacy	Custom pricing based on enterprise needs, including data management and HPC support
Rosetta	Rosetta	20-50 EUR/use	Pay-per-use	Protein structure prediction, molecular docking, and evolutionary design	Flexible, reflects the specialization of tools and specific field applications
MOE	Molecular Operating Environment (MOE)	25-40 EUR/use	Pay-per-use	Molecular simulation, drug design, perfect for occasional use	Reasonable for molecular simulation and protein design

Subscription models are commonly used by users who frequently access tools, covering functionalities from sequence analysis to experimental management, making them suitable for academic research and commercial users. Payperuse models offer greater flexibility and are ideal for users who need occasional access to advanced features. For large research institutions and companies, enterprise subscription models provide advanced functionalities and team collaboration tools, with higher pricing, meeting the needs of data security and highperformance computing.



This chart presents the pricing ranges of key bioinformatics tools, covering subscription models, payperuse options, and enterpriselevel subscription plans. The price ranges span from €49 (e.g., Geneious basic subscription) to €500 (e.g., Schrödinger Enterprise edition). Different colors distinguish the products, visually demonstrating their market positioning and pricing strategy variations. This information serves as a valuable reference for formulating competitive pricing strategies and lays the groundwork for capturing market share.

4.2 SWOT (Strengths, Weaknesses, Opportunities, Threats) Analysis to Assist with Competitive Product and Pricing Positioning

4.2.1. Strengths:

Broad and Diverse Product Functions: Our project aims to optimize subcellular localization of synthetic enzymes in yeast, providing users with specialized and efficient solutions through signal peptide design tools. Compared to competitors, our tool may have an advantage in modular functionality and specific application scenarios, particularly for users in biomanufacturing and synthetic biology fields.

Flexible Pricing: We will offer more flexible subscription and payperuse models to meet different user needs.

Technological Innovation: Our tool combines cuttingedge database technology, optimization algorithms, and bioinformatics methods, with a high degree of technical innovation, offering users leading solutions.

4.2.2. Weaknesses:

Low Market Visibility: Compared to wellknown platforms like Geneious and Benchling, we may need to invest more time and resources to increase market awareness and build user trust.

Specialized Functional Modules: Our product focuses on indepth solutions for a

specific field, which may limit its general applicability and user breadth compared to multifunctional platforms like Schrödinger.

High Initial R&D and Maintenance Costs: To ensure continuous iteration and technological updates, we may face high R&D investment and maintenance costs.

4.2.3. Opportunities:

Growing Market Demand: The bioinformatics and synthetic biology market is rapidly expanding, particularly in biomanufacturing, where the demand for optimization tools is steadily increasing, providing strong market opportunities for our product.

Trend Toward Customization: More users are seeking customizable and optimized solutions. Our payperuse model suits users who do not require longterm use but need highprecision functions. We can design customized feature packages for these users.

Collaboration and Expansion: We can collaborate with research institutions, universities, and companies to promote enterprise subscriptions and teambased solutions, offering specialized technical support and expanding our user base. We are also considering offering significant academic discounts.

4.2.4. Threats:

Competitors' Technological Advancements and Market Share: Established competitors like Geneious and Schrödinger have already captured a large portion of the market, and their continuous technological iterations and robust user ecosystems may pose a threat to new products.

Pricing Pressure: The bioinformatics tool market typically has a fixed pricing range, particularly in subscription models. If our pricing is too high, it may lead to lower market acceptance.

Regulatory and Policy Changes: As a tool that involves biological data, we may face challenges adapting to changing regulations, particularly in data privacy and security laws.

4.3 Our Product Pricing

4.3.1 Algorithm Store

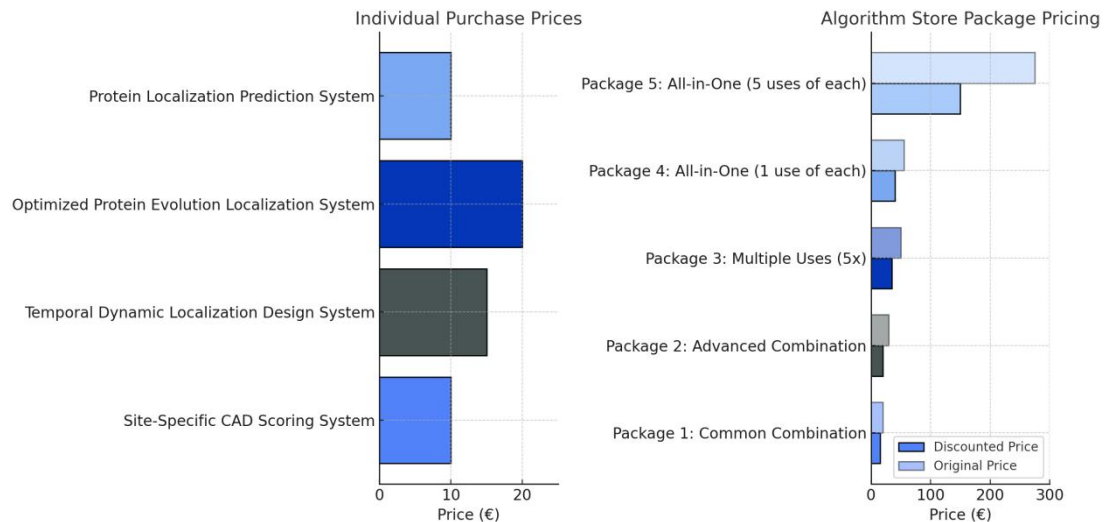
4.3.1.1 Individual Purchase Prices:

- 1. SiteSpecific CAD Scoring System**
 - Price: €10 per use
- 2. Temporal Dynamic Localization Design System**
 - Price: €15 per use
- 3. Optimized Protein Evolution Localization System**
 - Price: €20 per use

4. Protein Localization Prediction System

- Price: €10 per use

4.3.1.2 Algorithm Store Package Pricing and Validity:



1. Package 1: Common Combination

- Includes: SiteSpecific CAD Scoring System + Protein Localization Prediction System
- Price: €15 (normally €20 if purchased separately)
- Validity: 30 days (tools must be used within 30 days)

2. Package 2: Advanced Functionality Combination

- Includes: Optimized Protein Evolution Localization System + Protein Localization Prediction System
- Price: €20 (normally €30 if purchased separately)
- Validity: 30 days (tools must be used within 30 days)

3. Package 3: Multiple Uses of Specific Functions

- Includes: 5 uses of the SiteSpecific CAD Scoring System
- Price: €35 (normally €50 if purchased separately)
- Validity: 90 days (all 5 uses must be completed within 90 days)

4. Package 4: AllinOne Package (1 use of each tool)

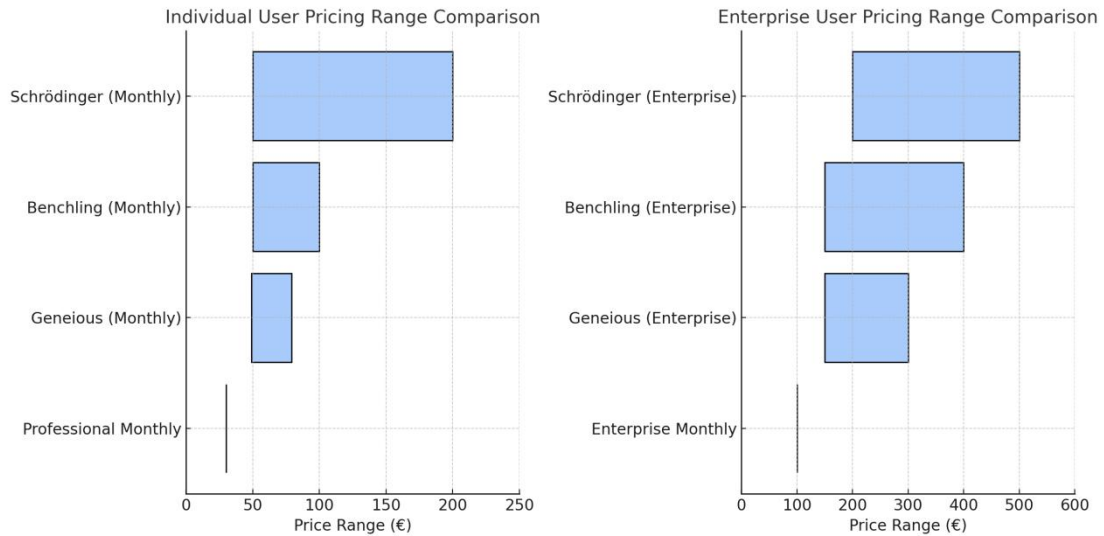
- Includes: 1 use of all algorithm tools
- Price: €40 (normally €55 if purchased separately)
- Validity: 90 days (all uses must be completed within 90 days)

5. Package 5: AllinOne Package (5 uses of each tool)

- Includes: 5 uses of all algorithm tools

- Price: €150 (normally €275 if purchased separately)
- Validity: 365 days (all uses must be completed within 365 days)

4.3.2 Membership Plans



4.3.2.1 Professional Membership Pricing:

- **Monthly Plan:** €30 per month
- **Annual Subscription:** €300 per year (saving the cost of 2 months)
- This plan provides unlimited access to all algorithm store functionalities, making

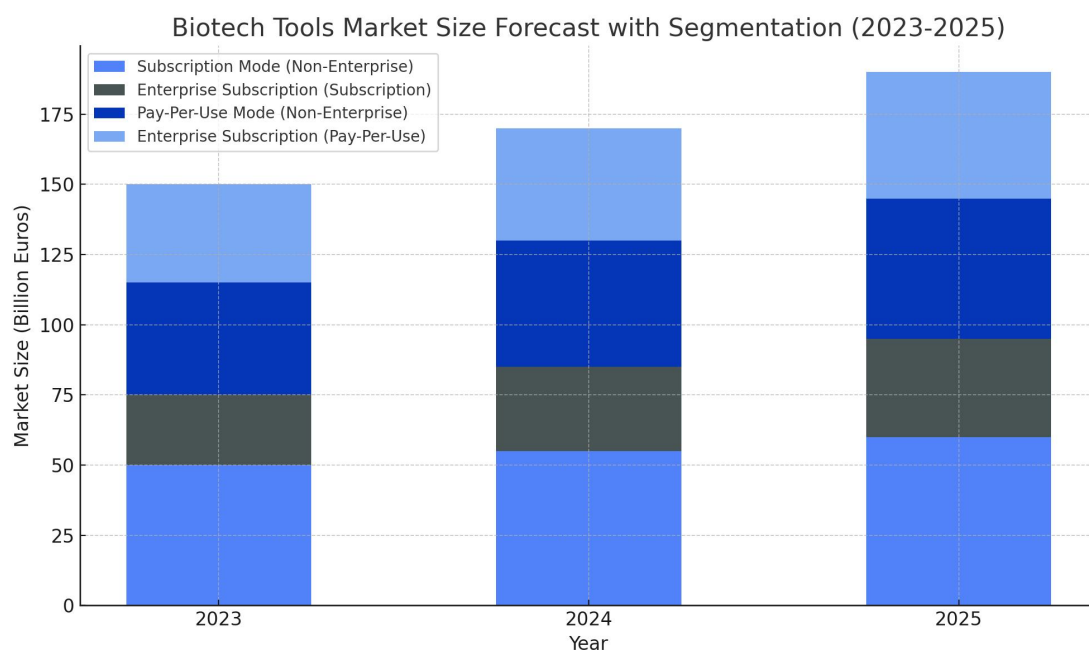
it highly attractive to researchers with highfrequency usage needs. With a competitive price point of €30 per month, it is ideal for small to midsized labs and research project teams.

4.3.2.2 Enterprise Membership Pricing:

- Enterprise subscription services are tailored for larger research institutions or companies, offering advanced functionalities, customized development, team management, and enhanced data security services.
- **Monthly Subscription:** €100 per month
- **Annual Subscription:** €1000 per year (includes a 1015% discount)
- The enterprise plan includes all professional membership features and adds advanced functionalities such as team collaboration tools and enhanced data privacy protection, making it ideal for largescale teams.

5. Financial Planning

5.1 Market Trend Forecast



The biotechnology tools market is expected to grow steadily from 2023 to 2025, increasing from approximately 150 billion euros to nearly 200 billion euros, reflecting the continued demand for tools in this field. We have also broken down the growth trends of different market segments in the chart, including subscription models (individual and enterprise) and payperuse models (individual and enterprise). Although all segments are growing, the growth rates differ. The enterprise subscription and payperuse models are experiencing faster growth and hold a larger share of the market, with projections indicating further expansion in the coming years. Additionally, while the personal subscription model holds a significant market share,

its growth remains steady. Overall, the biotechnology tools market is expected to maintain healthy growth in the coming years, particularly in enterprise subscription and payperuse models, highlighting their market potential and growth opportunities.

5.2 Market Size Forecast

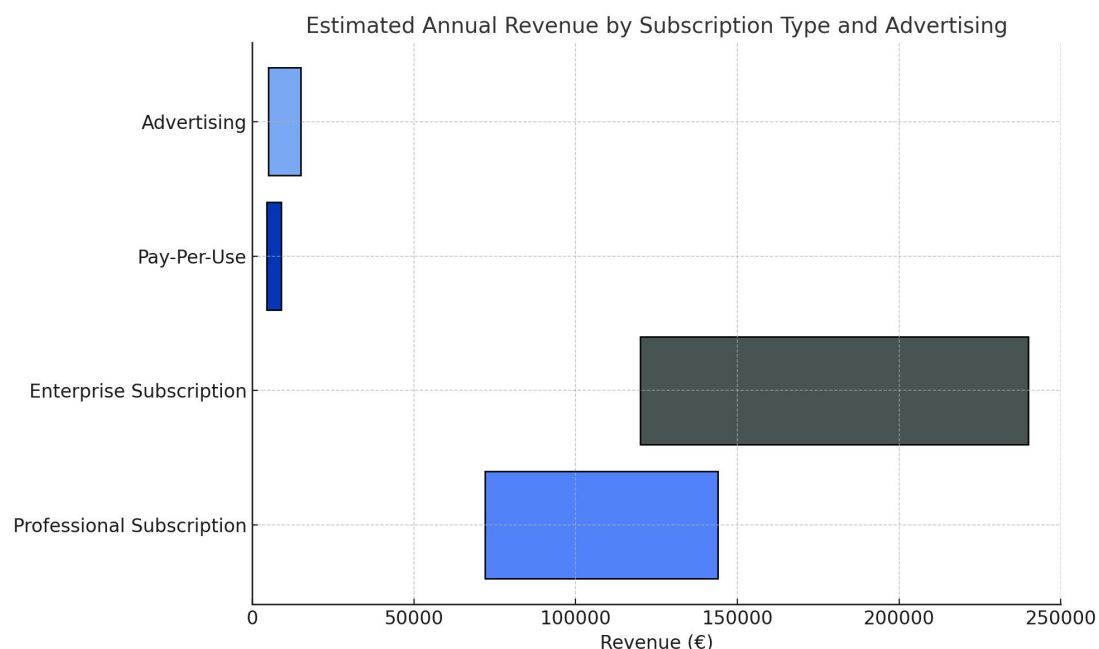
Since our software's niche market is relatively small, the global target user base will be limited. We define our target market as researchers and companies worldwide engaged in yeast metabolic engineering, protein production, and biopharmaceutical research.

Potential User Base Estimates:

- Research institutions, universities, and laboratories: 10,00030,000 researchers may be potential users.
- Biotechnology and synthetic biology companies: 5,00010,000 researchers.
- Biopharmaceutical companies: 2,0005,000 users, primarily from R&D and production teams.

Given that our product is highly specialized and targeted at a specific field, a 1% conversion rate may be reasonable, especially in the early stages of the market. This means that with an estimated 20,00040,000 potential users, the projected actual paying user base may be around 200400 users.

5.3 Revenue Forecast



Professional Version Subscription (€30/month):

Assuming 60% of paying users choose the professional version, the annual

revenue is approximately:

- $200400 \text{ users} \times €25 \times 12 \text{ months} = €72,000 \text{ to } €144,000/\text{year}.$

- The majority of users will likely opt for this subscription, providing a stable revenue stream, which will constitute a significant portion of the overall income.

Enterprise Version Subscription (€100/month):

Assuming 40% of paying users choose the enterprise version, the annual revenue is approximately:

- $100200 \text{ users} \times €125 \times 12 \text{ months} = €120,000 \text{ to } €240,000/\text{year}.$

- This is the primary revenue source, showing that enterprise clients are willing to pay more for premium features and services.

Payperuse (€15/use):

Assuming 30% of users opt for the payperuse model, with an average of 5 uses per year per user, the annual revenue is approximately:

- $60120 \text{ users} \times €15 \times 5 \text{ uses} = €4,500 \text{ to } €9,000/\text{year}.$

- While usage is limited, it provides an additional revenue stream, especially for occasional tool users, and helps to increase the total customer base.

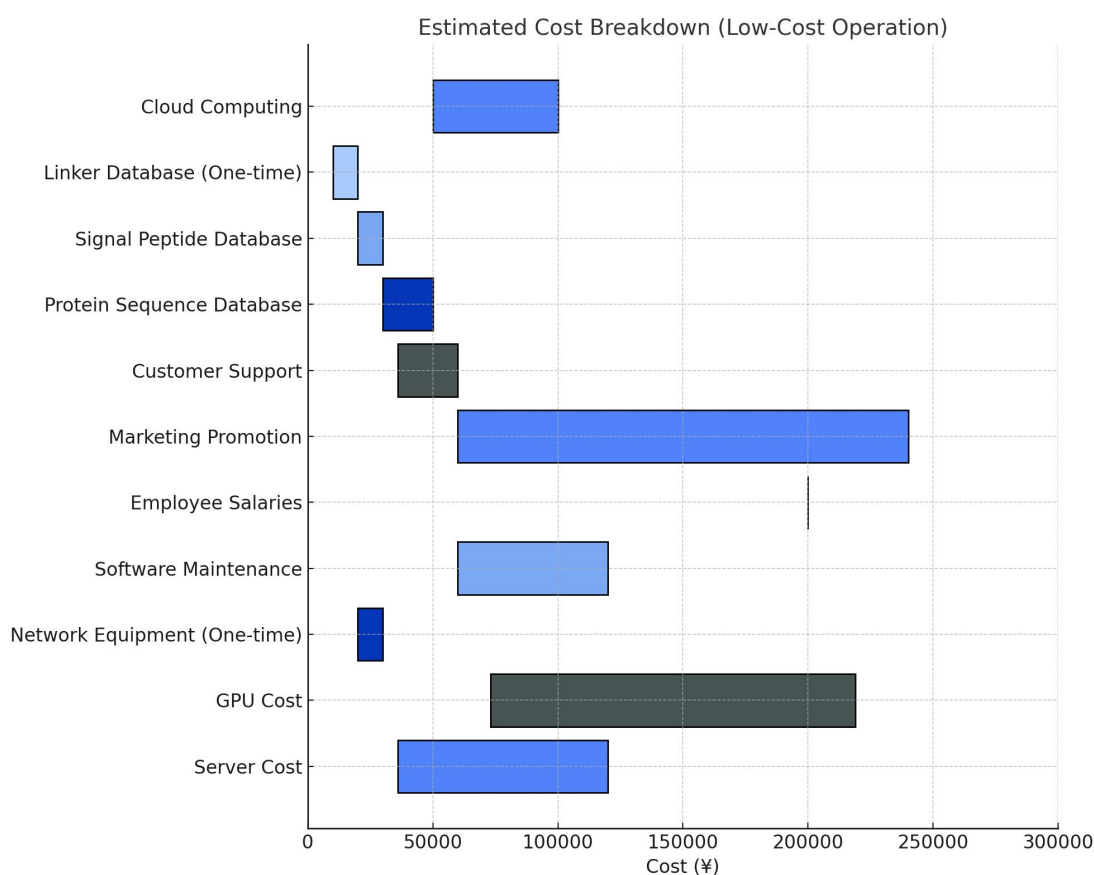
Advertising Revenue:

The minimum advertising revenue is €5,000, and the maximum is €15,000. It occupies a certain portion of the total revenue and serves as a strong supplement to nonuserpaid models.

The projected annual revenue is between €201,500 and €408,000. From the total revenue perspective, enterprise version subscriptions are the main source of income, while the professional version subscriptions provide relatively stable cash flow. Although payperuse and advertising revenue account for a smaller share, they add flexibility and diversity to the overall revenue.

5.4 Cost Estimate

The total annual cost for the first year is estimated to be between ¥595,000 and ¥1,219,000 (€76,000 to €156,000).



5.4.1 Hardware Costs

HighPerformance Server Rental: Opting to rent cloud servers to reduce upfront capital expenditures.

- Price: Approximately ¥3,000¥5,000 per server per month (depending on computing power and storage needs).
- At least 12 servers needed per year, with total annual costs ranging from ¥36,000 to ¥120,000 per year.

GPU Rental: For tasks like protein structure prediction using tools like AlphaFold, renting GPU power is necessary.

- Price: Approximately ¥5¥10 per hour per GPU (depending on the specific GPU model, such as NVIDIA A100). If using 46 hours of GPU resources daily, annual costs would be between ¥73,000 and ¥219,000 (based on 5 hours of GPU usage per day).

Network Equipment:

- Basic network equipment procurement costs: ¥20,000¥30,000 (including switches, firewalls, etc. for network security), which is a onetime investment.

5.4.2 Operational Costs

Atlas.Y Software Maintenance: Includes daily system updates, fixes, optimizations, and basic customer support costs.

- Estimated monthly maintenance cost: ¥5,000¥10,000, with total annual costs ranging from ¥60,000 to ¥120,000 per year.

Employee Salaries: Includes the basic salaries for an operational team (such as marketing staff, customer support, etc.).

- 2 employees with an annual salary of ¥100,000 each, resulting in a total annual salary expenditure of ¥200,000 per year.

Online Advertising and Marketing: Certain expenses will be required for marketing, including online ads (such as Google Ads, Baidu Ads) and offline promotional events. The estimated monthly marketing cost is ¥5,000¥20,000, with an annual total ranging from ¥60,000 to ¥240,000 per year.

Customer Support and AfterSales Services: Includes providing software usage guidance, technical support, etc.

- Monthly aftersales service costs (e.g., support staff salaries, customer service system maintenance) are estimated to be ¥3,000¥5,000, with an annual total ranging from ¥36,000 to ¥60,000 per year.

5.4.3 Data Costs

Database Access: Costs for accessing or purchasing protein sequence databases (such as Uniprot, PDB) may be high, but costs can be reduced through partnerships or partially free resources. The estimated annual cost for database access is ¥30,000¥50,000.

Signal Peptide Database Access: Fixed fees for accessing signal peptide databases. The estimated annual cost is ¥20,000¥30,000.

Database Construction or Acquisition: Building or purchasing a linker database requires initial construction or acquisition costs. The estimated onetime fee is ¥10,000¥20,000.

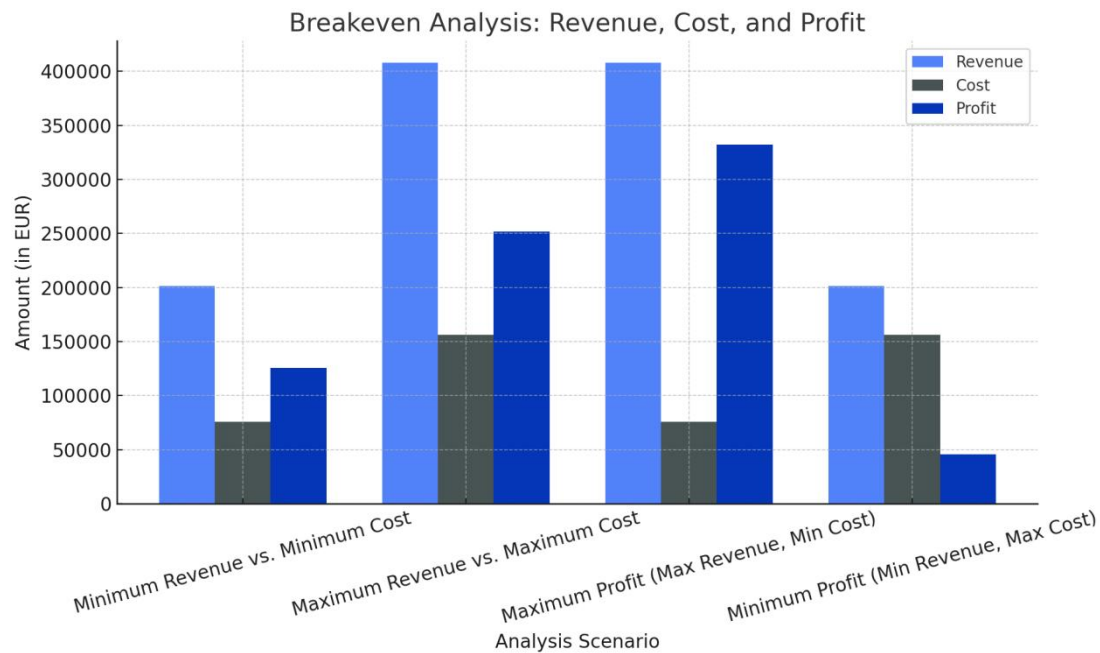
Cloud Computing Resources Rental: Used for protein structure prediction and molecular dynamics simulations, with relatively high computational resource costs. The estimated annual rental cost for computing resources is ¥50,000¥100,000 per year.

5.5 Breakeven Analysis

We have estimated the annual revenue for the global market in euros, with a projected range of €201,500 to €408,000. Meanwhile, since the company operates in

China, the costs are calculated in RMB, with total annual costs ranging from €76,000 to €156,000 (converted to euros). The comparison between income and costs shows that even under the most conservative scenarios, the company's revenue will exceed its costs, indicating profitability. We expect the first year's costs to be the highest over the next few years.

5.5.1 Breakeven Analysis



Minimum Revenue vs. Minimum Cost: The minimum revenue is €201,500, and the minimum cost is €76,000. Profit: $[\text{€}201,500 - \text{€}76,000 = \text{€}125,500]$ With minimum costs, the company can achieve a profit of €125,500.

Maximum Revenue vs. Maximum Cost: The maximum revenue is €408,000, and the maximum cost is €156,000. Profit: $[\text{€}408,000 - \text{€}156,000 = \text{€}252,000]$ With maximum revenue and maximum costs, the company can achieve a profit of €252,000.

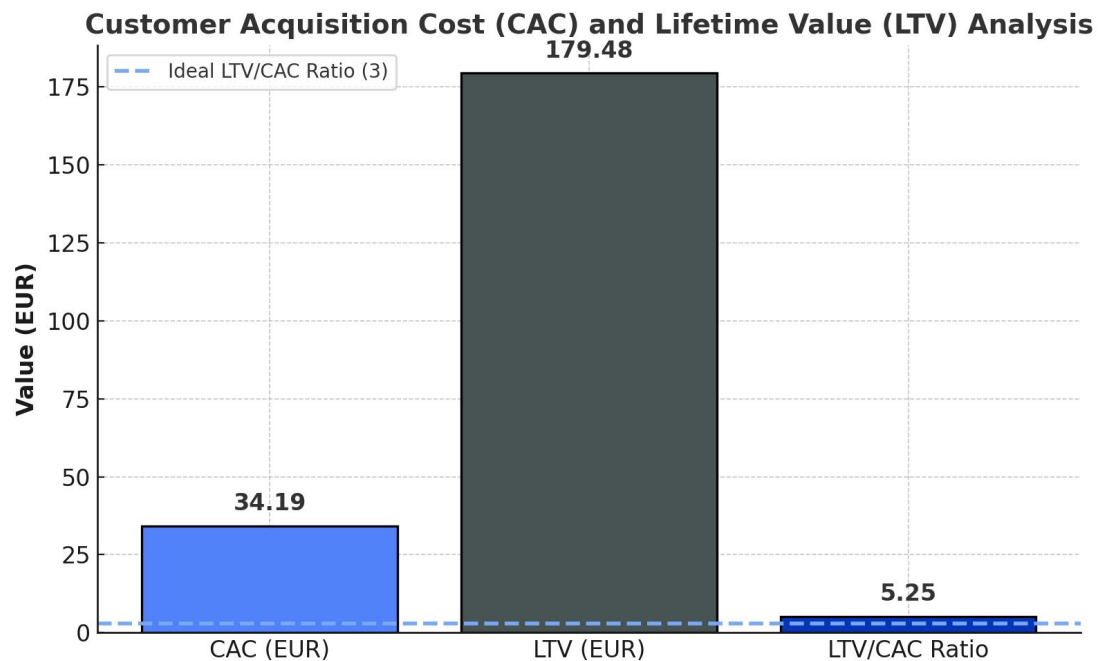
Maximum Profit: Maximum revenue is €408,000. Minimum cost is €76,000. Profit: $[\text{€}408,000 - \text{€}76,000 = \text{€}332,000]$ With maximum revenue and minimum costs, the company can achieve a maximum profit of €332,000. Profit margin: 22.6%.

Minimum Profit: Minimum revenue is €201,500. Maximum cost is €156,000. Profit: $[\text{€}201,500 - \text{€}156,000 = \text{€}45,500]$ With minimum revenue and maximum costs, the company can still achieve a profit of €45,500. Profit margin: 81.4%.

With the current revenue and cost structure, the company is already in a profitable state. As revenue increases and costs are optimized, the profit margin is

expected to expand further.

5.5.2 Customer Acquisition Cost (CAC) and Customer Lifetime Value (LTV)



Customer Acquisition Cost (CAC)

Assumptions:

Total Sales and Marketing Expenses: 80,000 RMB

New Customers: 300

CAC Formula:

$$\text{CAC} = \text{Total Sales and Marketing Expenses} / \text{New Customers} = 80,000 / 300 = 266.67 \text{ RMB}$$

To convert to Euros:

$$\text{CAC} = 266.67 \text{ RMB} / 7.8 = 34.19 \text{ EUR}$$

The Customer Acquisition Cost (CAC) is €34.19. This represents the amount you spend on average to acquire one customer.

Customer Lifetime Value (LTV)

Assumptions:

Average Annual Revenue per Customer: 500 RMB

Customer Lifetime: 3 years

Annual Maintenance Cost: 100 RMB

LTV Formula:

$$\text{LTV} = (\text{Average Annual Revenue} \times \text{Customer Lifetime}) - \text{Maintenance Cost}$$

Convert the revenue and cost to Euros:

$$\text{LTV} = (500 \text{ RMB} / 7.8 \times 3) - 100 \text{ RMB} / 7.8 = (64.10 \text{ EUR} \times 3) - 12.82 \text{ EUR} = 192.30 \text{ EUR} - 12.82 \text{ EUR} = 179.48 \text{ EUR}$$

The Customer Lifetime Value (LTV) is €179.48. This represents the total revenue generated from a customer over their lifetime minus the maintenance cost.

LTV to CAC Ratio

The LTV/CAC ratio is an important metric that helps determine the efficiency of customer acquisition:

$$\text{LTV/CAC} = \text{LTV} / \text{CAC} = 179.48 / 34.19 = 5.25$$

A LTV/CAC ratio of 5.25 indicates that for every €1 spent on acquiring a customer, the business generates €5.25 in customer lifetime value.

Ideal Ratio: Generally, an LTV/CAC ratio above 3 is considered healthy and shows strong profitability. In this case, the ratio of 5.25 suggests a highly efficient acquisition strategy and strong longterm profitability from each customer.

Given the strong LTV/CAC ratio, the company can consider scaling its marketing and sales efforts to acquire more customers, as the cost of acquisition is significantly lower than the value each customer brings over their lifetime.

6. Future Development

6.1 Accelerator



For a startup, support from an **accelerator** is crucial, and we are fortunate to have received strong backing from **Tongji University Entrepreneurship Valley**. As a worldrenowned university, Tongji University offers our project a wealth of resources and a broad platform. Entrepreneurship Valley not only provides us with office space and entrepreneurial training, but also connects us with potential investors, corporate clients, and technical experts through its extensive alumni network and cooperative resources. This support has not only accelerated our project progress, but has also enabled us to engage in deep discussions with industry leaders at an early stage, gaining critical market and technical feedback.

As one of China's leading university incubators, Tongji University Entrepreneurship Valley has **a comprehensive acceleration service system**, offering full support to our project, from business model optimization, fundraising guidance, to marketing strategies. Particularly in the early stages of financing planning, business model validation, and market strategy formulation, the expert team at Entrepreneurship Valley has provided valuable advice, helping us identify our market position and clarify our development path in a highly competitive environment.

With the support of Tongji Entrepreneurship Valley, we are able to efficiently access market information and quickly connect with policy support and industry resources. For instance, through connections with government bodies and industry associations, we can prioritize participation in various innovation and cooperation projects within the biotechnology sector. This has not only accelerated our commercialization process but has also enhanced our influence in the bioinformatics industry.

In August 2024, we officially joined the Tongji University Entrepreneurship Valley incubation base. With the support of Tongji Entrepreneurship Valley, we are more confident that the Atlas.Y project will achieve significant breakthroughs in the biotechnology field and gradually reach global markets. Entrepreneurship Valley has not only provided us with resources and networks, but also revealed broader opportunities for future development. Through this accelerator platform, we will continue to innovate and drive the project towards higher levels of commercial success and social impact.

6.2 Strategies for Sustained Revenue Growth

6.2.1 Membership Upgrade Strategy:

Encourage users to transition from free or payperuse models to subscription plans by offering incentives. For example, users can receive discounts for upgrading, or access to additional services like premium features, priority support, or exclusive content. A tiered subscription model can also motivate users to upgrade by highlighting the benefits of highertier plans, such as increased usage limits or faster processing times.

6.2.2. ValueAdded Services:

Introduce extra paid services or premium features to boost revenue. This could include offering advanced data analysis tools, personalized reports, or customization options tailored to specific customer needs. Technical support could be offered as a subscription service, or users could pay for specific consultations or expert advice. These addons will create new income streams while improving customer satisfaction.

6.2.3. CrossSelling and Bundling:

Develop bundle deals that combine your primary bioinformatics tools with complementary products, such as related databases or thirdparty software. Offering

discounted packages for multiple tools or features can incentivize users to purchase more, increasing overall revenue. Crossselling within your existing user base is an effective way to promote upgrades or additional products.

6.3 Marketing Strategy

6.3.1 Brand Promotion in the Scientific Community

- **Collaboration with Research Institutions:**

Promote the product through partnerships with renowned global research institutions, universities, and laboratories. Sponsoring academic conferences, workshops, or webinars in related fields can increase the product's visibility in the biotechnology community.

- **Case Studies and Academic Papers:**

Publish successful case studies and academic papers demonstrating the software's realworld applications, such as optimizing yeast metabolic pathways. This not only enhances brand credibility but also attracts highend clients.

6.3.2 Online and Offline Promotion

- **Targeted Advertising:**

Run targeted ads on platforms like Google Ads, LinkedIn, and ResearchGate, focusing on researchers and companies in the fields of metabolic engineering and biopharmaceuticals.

- **Video Content Creation:**

Collaborate with wellknown Bilibili content creators in the biotech space to produce software demos, feature walkthroughs, and tutorials, enhancing the product's appeal and usability through visual content.

- **Online and Offline Academic Lectures and Training:**

Hold regular online training sessions on optimizing subcellular localization using the software, attracting potential users and increasing conversion rates. Participate in global events and academic conferences related to synthetic biology and biopharmaceuticals to showcase the latest features and directly engage with target customers.

- **Collaborating with Key Opinion Leaders (KOLs):**

Work with influential scholars and researchers to endorse the product through social media or conference presentations, leveraging their authority to expand market penetration.

6.3.3 Free Trial Program

- **LimitedTime Free Use:**

Offer a onemonth free trial, allowing potential customers to use the software in real projects and experience its advantages in optimizing yeast enzyme localization, encouraging conversions to paid users.

- **Premium Feature Previews:**

Allow free users to preview some premium features (e.g., automatic optimization in signal peptide design) to demonstrate their value and encourage upgrades to subscription plans.

6.3.4 Academic Discounts

- **Special Offers for Researchers:**

Provide academic discounts or subscription packages for researchers at universities and institutions, attracting customers from the academic community. Offer differentiated pricing for professional and enterprise subscriptions to cater to various needs.

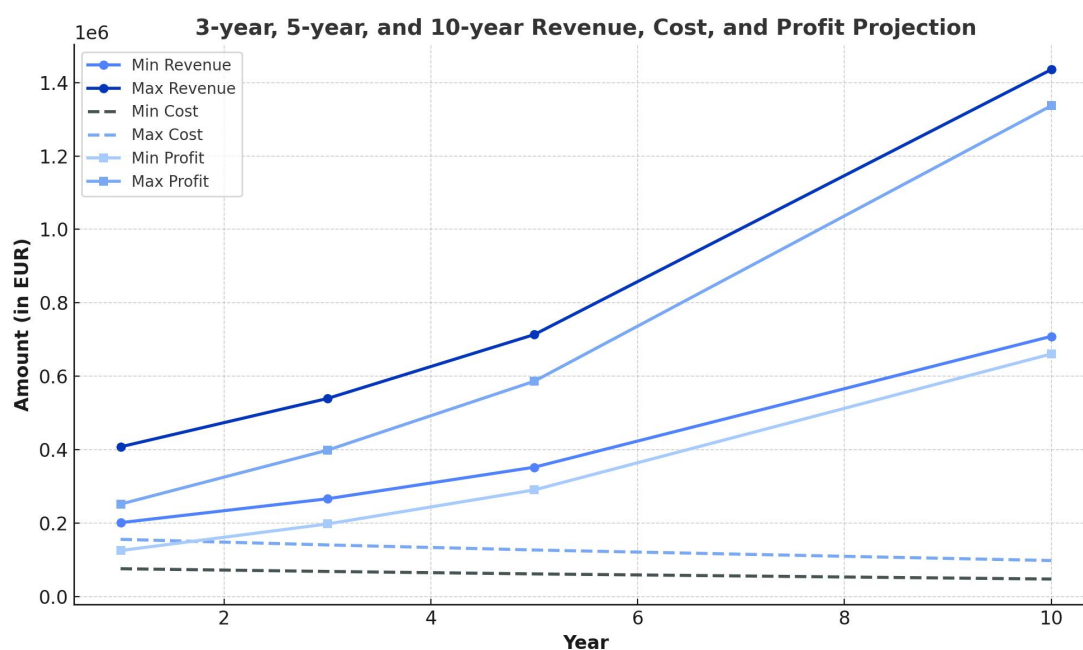
- **Bundled Sales:**

Partner with other bioinformatics tools or databases to offer subscription bundles, providing discounts for multiple tool or service combinations, thereby increasing overall purchase intent.

6.4 Stage Forecast

Assuming that the number of customers and market share will gradually increase, while also considering that the costs are higher in the first year and will decrease over time, and the revenue will gradually grow. We made the following assumptions for the projection:

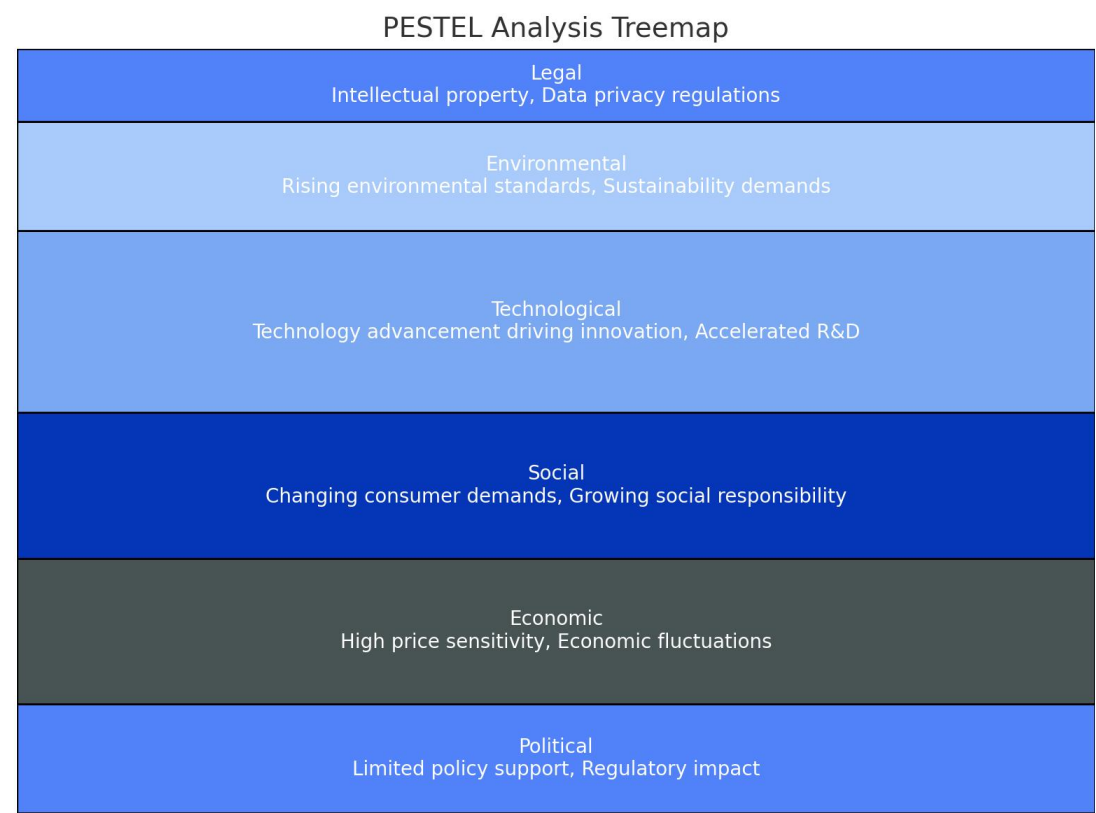
- **Customer growth:** Assuming an annual growth rate of 10%15%, starting from the first year with 200400 paying users, and gradually increasing.
- **Cost reduction:** Due to the initial investment in hardware and infrastructure, the costs will be higher in the first year but will gradually decrease in the following years.
- **Revenue growth:** As the number of customers increases, it is expected that revenue will achieve significant growth over 3, 5, and 10 years.



Here is the 3year, 5year, and 10year projection for revenue, cost, and profit,

considering both minimum and maximum scenarios. The chart illustrates the steady growth in revenue, gradual reduction in costs, and subsequent increase in profits over time.

6.5 Risk Consideration and Avoidance



6.5.1 Political Factors

Risk: The bioinformatics tools market has relatively limited government support, and there is a lack of unified regulations and standards globally, especially concerning data privacy and biotechnology regulations. This means that companies operating in multiple countries or regions must comply with different regulatory requirements, which could increase compliance costs.

Mitigation Measures:

- Regulation Diversity Response: Establish a dedicated compliance team responsible for interpreting regulations in different markets and ensuring product legality across regional markets. Proactively engage with regulators in various countries to participate in policy discussions and be prepared for potential regulatory changes.
- Policy Adaptability for Global Operations: Design software that can flexibly adjust data privacy handling methods to comply with the different regulations (e.g., GDPR, CCPA) in various countries and regions, ensuring global adaptability.

6.5.2 Economic Factors

Risk: The target users, including academic research institutions and biotech startups, are highly sensitive to pricing, and global economic fluctuations may lead to a reduction in customers or a suspension of subscription services. In a subscriptionbased model, users' longterm payment capacity may be affected by global economic volatility.

Mitigation Measures:

- **Flexible Pricing Strategy:** Offer tiered pricing plans, such as discounts or installment payment options for small research teams or startups. Additionally, increase payperuse options to reduce the financial burden on customers.
- **Proactive Response to Economic Fluctuations:** Conduct regular market research to adjust pricing strategies according to global economic trends, and offer discounts for longterm contracts to maintain stable income during economic downturns.

6.5.3 Social Factors

Risk: As personalized medicine and genomics rapidly develop, the demand for customized services is increasing. Additionally, the demand for social responsibility from bioinformatics tools is rising, with the public paying greater attention to corporate transparency and ethical issues, particularly in the field of gene editing.

Mitigation Measures:

- **Expansion of Customized Services:** Continuously optimize software functionality to provide customizable analysis tools that meet the needs of various customer groups, particularly in personalized medicine and genomics research. Allow customers to adjust software modules based on their specific project requirements.
- **Social Responsibility Transparency:** Highlight the company's commitment to data privacy, ethics, and social responsibility on the website and promotional materials. Regularly publish social responsibility reports to enhance public trust in the company.

6.5.4 Technological Factors

Risk: Technological advancement is rapid, particularly in artificial intelligence, machine learning, and big data processing, driving innovation in bioinformatics tools. Companies need to maintain rapid technological iterations, or they risk being overtaken by competitors.

Mitigation Measures:

- **Accelerating R&D:** Establish a dedicated R&D team to maintain technological leadership and regularly release new features and version updates. Collaborate with leading research institutions and tech companies to access the latest technological resources and accelerate innovation through joint development.
- **AI and Big Data Integration:** Incorporate artificial intelligence and big data technologies into the product to enhance analytical capabilities, meeting users'

demands for more efficient and accurate data processing, thereby maintaining technological competitiveness.

6.5.5 Environmental Factors

Risk: With increasing global attention on sustainable development, concerns regarding server energy consumption and environmentally friendly data center design may impose higher demands on bioinformatics companies. Additionally, users and investors are increasingly focused on corporate sustainability performance.

Mitigation Measures:

- **Use of Green Technology:** Prioritize the selection of energy efficient, low carbon emission data centers and servers to ensure that the company's environmental investments align with global sustainability goals. Obtain environmental certifications to enhance market competitiveness.
- **Sustainability Commitment:** Minimize environmental impact during product development and operations, actively participate in sustainability programs and environmental initiatives, and demonstrate the company's responsibility and long term commitment to sustainability.

6.5.6 Legal Factors

Risk: The project involves a significant amount of patents and intellectual property, especially in the development of new algorithms and technologies, which may lead to intellectual property disputes. Additionally, with the widespread implementation of GDPR and other global data privacy regulations, ensuring data security and privacy compliance remains a significant challenge.

Mitigation Measures:

- **Intellectual Property Protection:** Ensure that relevant patents and intellectual property licenses are obtained during software development, and promptly apply for patent protection for newly developed algorithms and technologies to avoid infringement disputes.
- **Data Privacy Compliance:** Design the software to comply with privacy regulations in different countries, especially when handling sensitive data. Strictly adhere to GDPR and other relevant laws, and conduct regular data security audits to ensure the platform's compliance.

6.6 Future Vision

The Atlas.Y software we are developing, designed for optimizing subcellular localization of synthetic enzymes in yeast, has already demonstrated immense potential in the biotechnology and synthetic biology fields. Looking ahead, Atlas.Y will not only become an indispensable tool for researchers but also drive global biomanufacturing technology toward more efficient and precise solutions.

As the biopharmaceutical and synthetic biology markets continue to thrive, the commercial value of Atlas.Y will continue to rise. Enterprise users have a strong

demand for precise and efficient bioinformatics tools, and Atlas, with its proprietary optimization algorithms and databases, can offer seamless solutions for fields such as biopharmaceuticals, gene editing, and fermentation engineering. In the future, we plan to expand Atlas's application scenarios, not only serving academic institutions and corporate laboratories but also playing a critical role across various stages of the biopharmaceutical production chain, from drug development to industrial production.

We envision Atlas.Y becoming the global leader in the bioinformatics market through its integration of customized services and big data. Atlas.Y will provide enterprise users with more value-added services while creating diverse revenue models, such as data services, experimental process integration, and plugin-based solutions. Based on our collaboration with industry leaders like DerYin Technology, Atlas.Y will continually evolve, becoming a vital part of the platform ecosystem, and through constant optimization and innovation, it will capture an even broader market share.

From a societal perspective, Atlas's commercialization will not only drive innovation in the bioinformatics field but will also have a positive and far-reaching impact on society as a whole. In the context of the rise of synthetic biology and personalized medicine, Atlas.Y can help increase drug development efficiency and shorten the biopharmaceutical cycle, thus accelerating the development and application of new drugs. This will significantly improve access to advanced medical treatments worldwide, helping more patients receive cutting-edge therapies and ultimately enhancing global health outcomes.

Moreover, with increasing global attention on sustainable development, Atlas.Y can play a role in areas such as biofuels and green chemistry, reducing energy consumption and chemical reagent use through precise optimization of biosynthetic pathways, promoting the widespread adoption of environmentally friendly production. We believe that Atlas.Y is not just a software tool; it will become an essential engine driving the future of the green economy and biotechnology revolution.

We are confident that Atlas.Y will become an indispensable digital tool in the global biotechnology field, helping more enterprises and research institutions achieve digital transformation in the biosciences sector, and promoting further development in the global biopharmaceutical industry and the green economy.